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Emergency Preparedness Segment

ATKINSON:

In this segment we will discuss emergency preparedness. Unfortunately, we can't eliminate all unexpected events. So it becomes crucial to plan and prepare for emergencies. We all want to perform flawlessly when an emergency occurs, and a familiar, practiced plan helps that happen.

There are a variety of emergency situations that can arise in a day in the life of an office or clinic. Storms and other natural disasters can damage your facility or knock out your power. You should have a contingency plan for this sort of situation, particularly loss of power. Protecting your vaccine supply should be a high priority.

Then there are medical emergencies. Anything can happen in a medical provider's office, from heart attacks to delivery of babies to injuries. For this program we will forego a discussion of emergency C-section and focus on two office setting emergencies that could be vaccine related - syncope and allergic reactions.

Prevention of an emergency is the first consideration in developing an emergency plan. Screening for allergies and reactions following prior vaccine doses can prevent an emergency from occurring. We will discuss screening for contraindications and precautions later in the program.

Serious allergic reactions are very uncommon following vaccination, but syncope is not uncommon. Judy, could you talk about syncope?

SCHMIDT:

I'd be happy to. Syncope is a sudden loss of consciousness, commonly known as a vaso-vagal response, or fainting. Syncopal episodes are rare in infants and young children, they are most common in older children and adolescents. Every person who has given vaccines for a few years has seen a 200 pound high school

tackle faint after receiving a shot. Serious injury can result from a syncopal episode, including broken bones, head trauma, and brain injury.

One way to prevent a syncope related emergency relates to the patient's posture or position during vaccine administration. Infants and young children are usually held by a parent or sitting during their immunizations. It's a good idea for older children, adolescents and adults to sit during vaccination. Sitting during vaccine administration may either prevent syncope or prevent an injury caused by a fall.

Most syncopal episodes occur less than 5 minutes after vaccine administration, and nearly 90 percent occur within 15 minutes. As a result, you should consider observing older children, adolescents, and adults for 15 to 20 minutes after vaccination, if possible.

Office staff should be aware of and watch for warning signs that syncope could occur - a patient who is highly anxious, pale, or perspiring. If you think a syncopal episode is about to occur- or has occurred- have the patient lie down and elevate his or her legs 10 to 12 inches. Make sure the person's airway is open. People who experience a syncopal episode should be observed until their symptoms resolve.

Just a reminder- a syncopal episode is NOT a contraindication for future doses of the vaccine. Syncope is NOT an allergic reaction. If indicated, the person should receive subsequent doses on schedule.

Another potential vaccine related emergency is a severe allergic reaction or anaphylaxis. Severe allergic reactions are rare, but you need to be prepared to deal with it should it occur. Donna, could you give us details about emergency preparation for allergic reactions?

WEAVER:

Yes I will, Judy. You're right- anaphylactic reactions following vaccination are very rare when people are screened appropriately. It's critical that a vaccination provider be aware of their patient's allergies to components of the vaccine such as gelatin, eggs, or an antibiotic. The components of each vaccine are listed in the package insert that comes with the vaccine. So if you discover that a person has had a severe allergic reaction to egg, you could look through all the package inserts of vaccines you intend to administer that day, and look for ones that contain egg protein. Or, you could do this an easier way.

Here is a table that lists vaccine components, and lists which vaccines contain that component. The table was published by the company Facts and Comparisons in their monograph called Immuno Facts. Facts and Comparisons agreed to allow us to distribute it from the National Immunization Program website. It's a valuable tool when a patient reports an allergy to a specific substance that may be included as a minor component of a vaccine. You should definitely have a copy of this table in your office.

Of course, it's possible that there can be allergies unknown to the patient or provider until symptoms are experienced. When a reaction unexpectedly occurs, EARLY detection of allergic symptoms and management of anaphylaxis can be lifesaving.

When the symptoms of facial flushing and edema, hives, swelling of the mouth, wheezing, and shortness of breath begin, immediate recognition and treatment may avoid a more severe and life threatening reaction. It sounds simple, but when the flushed face of an upset, crying child becomes more than expected, the child may, in fact, be in the initial stages of an allergic reaction. The facial flushing may increase and progress to facial edema, wheezing, and shortness of breath.

When office staff perform their regular review of the emergency plan, it's also an opportunity to be sure the emergency contact information is current. Emergency phone numbers should be posted on or near each telephone and kept up to date. The staff responsible for calling emergency assistance should know what to say and how to describe their office location. Emergency response personnel tell us that time spent in finding a provider's office inside of a building can be critical. It's very beneficial to assign a staff member the responsibility of meeting ambulance personnel at the building entrance, and securing an elevator. All office personnel should have current CPR certification, and know where the emergency equipment is located.

Judy, will you tell us more about emergency equipment?

SCHMIDT:

Sure Donna. Every office should have an emergency kit, and it should be inspected periodically to be sure it's up to date and functioning properly.

Emergency kits come in many sizes and shapes. Every office should have an emergency kit or box of equipment that is kept in a specific, centrally located place. The equipment should be placed

in the box in a way that is easily seen and retrieved.

What should be in your kit? An important piece of equipment is the oral airway. More than one size of airway should be in the emergency box. The sizes and number of airways depend upon the provider's patient population. For example, a pediatric office will most likely have a fewer number of airway sizes than a Family Practice office that sees patients of a greater range of sizes.

One or more resuscitation bags should be included depending upon the ages of the patient population. A demonstration on how to use the equipment given by the vendor representative or other expert along with regularly scheduled practice is vital. A stethoscope and blood pressure cuff should be in the emergency equipment supply along with ammonia capsules, and at least three syringes, needles, and some alcohol swabs. Your kit should contain emergency drugs, particularly epinephrine and diphenhydramine. Some emergency kits include these medications in prefilled syringes supplied by the manufacturer.

Epinephrine is administered SUBCUTANEOUSLY in a limb opposite the immunization site and is usually massaged after injection to promote absorption. The dose is determined by either the body weight or age of the person. It's helpful to have a table in your kit that lists these dosages. The dose can be repeated in 10 to 20 minutes if indicated by symptoms.

Diphenhydramine hydrochloride, commonly known by its brand name of Benadryl, may shorten an allergic reaction. But its effect is delayed rather than immediate. Depending upon the severity of the symptoms, it may or may not be useful. Diphenhydramine hydrochloride is also given by body weight.

One final point concerning emergency preparation. No matter how well a protocol is written, it's helpful only when office staff are well prepared and ready to act. Office staff should keep their CPR certifications current. Emergency procedures should be reviewed periodically, and training updates provided to staff. Documenting training in a personnel folder may be helpful in promoting staff competency. Of course, training new staff in the office emergency plan is critical, and should be part of their orientation. Severe allergic reactions are rare events. But because they can be fatal if not managed properly, your staff must be ready to respond.

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